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# The first records of Phycini from Madagascar (Diptera: Therevidae: Phycinae)

by

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## ABSTRACT

Two new species of *Ruppellia, keiseri* and *multisetosa*, are described from Madagascar. They are the first Phycini recorded from this island.

## INTRODUCTION

The Phycini of southern Africa were reviewed by Lyneborg (1987). Six genera were recognised, viz., *Phycus* Walker, 1850; *Stenogephyra* Lyneborg, 1987; *Neotabuda* Kröber, 1931; *Orthactia* Kröber, 1912; *Ruppellia* Wiedemann, 1830; and *Acathrito* Lyneborg, 1983. At the same time it was announced that *Ruppellia* was represented on Madagascar by two undescribed species, these being the first known members of the tribe Phycini from this island. As no Xestomyzini so far are recorded from Madagascar (*vide* Lyneborg 1980), the two *Ruppellia* species also represent the only known therevids of the subfamily Phycinae.

In addition to the two *Ruppellia* species described below, the therevid fauna of Madagascar comprises the endemic genus *Stenopomyia* Lyneborg, 1976, with 13 species, and 3 species of the widespread Afrotropical and Oriental genus *Irwiniella* Lyneborg, 1976.

## TAXONOMY

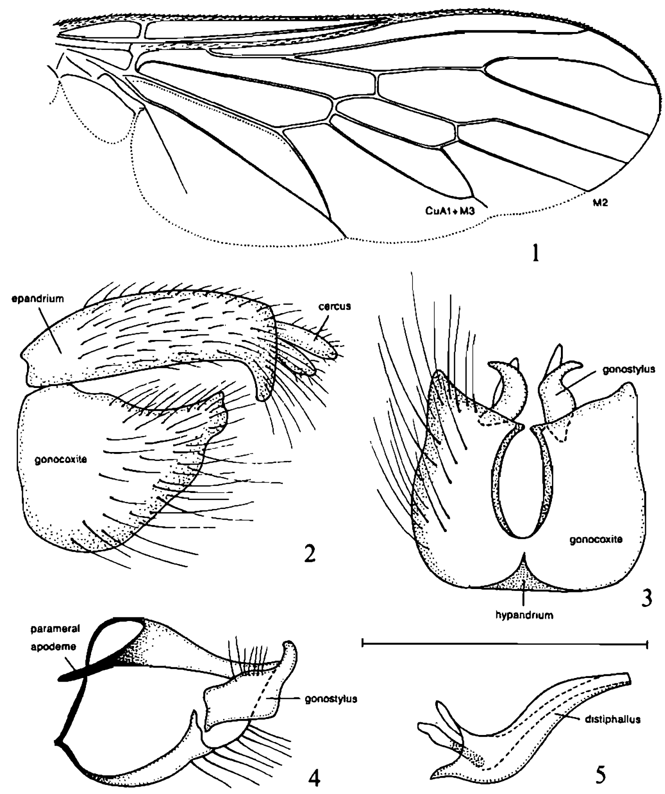
### Genus *Ruppellia* Wiedemann.

*Ruppellia* Wiedemann, 1830: 625. Type species: *R. semiflava* Wiedemann, 1830, by monotypy.
For full synonymy: see Lyneborg (1980).

Lyneborg (1983: 196) published a redescription of *Ruppellia*. The synapomorphic characters for members of the genus are as follows: (a) mesonotum more or less hump-backed; (b) ambient vein stops at outrun of $M_2$ (Fig. 1); (c) $CuA_1+M_3$ is abbreviated and does not reach wing margin (Fig. 1); (d) gonocoxites fused anteriorly with hypandrium and with each other (Fig. 3) and carry no parameral process (Fig. 4); (e) distiphallus forms a strong upright and nearly straight cone, the remaining elements of aedeagus being greatly reduced (Fig. 5).

The genus *Ruppellia* seems to have its centre of distribution in the African part of the Palaearctic region, extending from the Canary Islands through Tunisia, Libya, Egypt and Sudan, to Israel and further eastwards to Iran and Central Asia.

The desert and semi-desert areas of the north-eastern part of the Afrotropical region contain several species, the taxonomy of which is in a poor state due to



Figs 1–5. Diagnostic characters for *Ruppellia*; all *R. semiflava* Wiedemann. 1. Wing, note termination of ambient vein at $M_2$ and abbreviated $CuA_1+M_3$. 2. Male genitalia, lateral view, note absence of parameral process. 3. Gonocoxites, ventral view, note fusion with hypandrium. 4. Right gonocoxite with gonostylus in inside view. 5. Aedeagus, lateral view, note upright and nearly straight distiphallus. Scale 0,5 mm.

insufficient material. Among these species is the type-species *semiflava* Wiedemann from Sudan. The only species in continental southern Africa is *Ruppellia basalis* (Loew, 1858), which occurs in Namibia. In January–February 1978 my colleague, Dr O. Lomholdt, collected a fine series of 26 males and 58 females of this species at Gobabeb; most specimens being taken in the Kuiseb river-bed.

Two new species of *Ruppellia* are here described from Madagascar. They are easily separated from each other by a number of characters, among which are the very distinctive antennae (Figs 6–7) and the number of dorsocentral setae. There are only minor differences in the male terminalia. These have not been illustrated, but are compared with those of the type-species shown in Figs 2–5.

## **Ruppellia keiseri** sp. n.

Fig. 6

Etymology. Named after the late Dr Fred Keiser, who collected intensively on Madagascar in 1957 and 1958.

Description, ♂.
Total length. 4,8–5,2 mm.

*Head* (Fig. 6). Eyes touching for a distance equalling 1,5 times height of ocellar triangle. Upper facets slightly enlarged compared to lower ones. Frontal triangle slightly raised in profile view, black and rather shiny, but not polished due to a slight cover of tomentum. Rest of head black with grey tomentum. Pile of frons composed of black hairs nearly as long as scape; lateral areas of face also with long black pile. Postocular setae short and thin; pile on lower occiput mostly black. Ratio of antennal length: depth of head is 24:33. Ratios of antennal segments are as follows: scape 10:4, pedicellus 3:4, first flagellomere 9:6, style 2 (Fig. 6). Antenna black, with long black pile on scape. Palpi and proboscis equally long, reaching level of antennal bases.

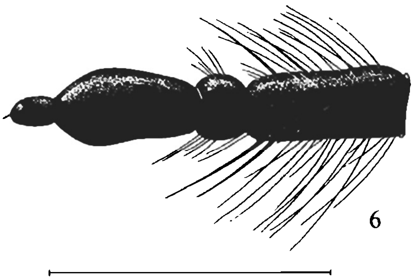
*Thorax*. Only slightly hump-backed. Mesonotal chaetation: np = 4, sa = 1, pa = 1, dc = 2, sc = 1. Disc of mesonotum black, indistinctly brownish black striped and steel-grey tomentose. Pile on disc erect, rather sparse, and black; hairs longer than half length of dorsocentral setae. Pleura black, more or less greyish tomentose; long black pile on mesopleuron and upper sternopleuron. Scutellum coloured and piled as disc of mesonotum.

Wings. Intensively greyish brown, with strongest tinge in streaks along veins. Knob of halter yellowish, yet brownish around base; stem brownish.

Legs. Fore femur with single anteroventral seta at middle, mid femur without it, and hind femur with 1–3 anteroventrals near apex. Posterior to posteroventral surfaces of fore and mid femora with long black pilosity. Legs entirely black.

*Abdomen*. Tergites black, T1–4 with white to white-yellow hindmargins, disc dulled with brownish tomentum. Pile mostly blackish.

♂ terminalia. Agree in basic design completely with those of type-species (Figs 2–5). Main differences as follows: gonocoxite more sharply pointed posteriorly; gonostylus more slender basally; distiphallus absolutely straight.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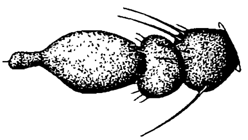
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Figs 6–7. Antenna, lateral view. 6. *Ruppellia keiseri* sp. n. 7. *R. multisetosa* sp. n. Scale 0,5 mm.

♀.

Total length. 7,1 mm.

*Head.* Frons narrow above, at level of anterior ocellus only about 0,3 times distance between vertex and antennal bases, strongly widening below as frontal width at antennal bases is about 0,75 times that same distance. Both upper and lower frons slightly raised in profile. Most of frons shiny black, on upper part narrowly tomentose along eye-margin, at level of middle of frons tomentose strip slightly wider. Lower frontal pile shorter than in ♂. Facial pile as in ♂. Postocular setae much stronger than in ♂. Pile on lower occiput mostly pale. Antennae, palpi and proboscis as in ♂.

*Thorax.* Chaetation and coloration as in ♂, but pile on mesonotal disc and scutellum very short; pleural pile pale.

Wings and legs as in ♂, but pilosity on fore and mid femora much shorter and paler.

*Abdomen.* T1–4 show same distinct white-yellow hindmargins as ♂, but also integument in front of hindmargins more or less yellowish brown translucent, most distinctly so laterally. Pile also much shorter than in ♂.

Material examined. MADAGASCAR: 1 ♂ (holotype), Madagascar Sud, dct Ambovombe, Beloha 175 m, 20–21.ii.1957, B. Stuckenberg (NM); 1 ♀ (paratype), Madagascar Sud-Ouest, dct Tuléar, Saint-Augustin 6 m, 11–13.ii.1958, B. Stuckenberg (NM); 1 ♂ (paratype), Tuléar, Ambovombe, 28.ii.1958, F. Keiser (ZMC).

Distribution. The three localities are in the south-western part of Madagascar, a region covered by xerophytic scrub and grass.

## **Ruppellia multisetosa** sp. n.

Fig. 7

Etymology. L. *multis* = many, *seta* = bristle. Refers to the unusually high number (5 pairs) of dorsocentral setae.

Description, ♂.

Total length. About 5 mm.

*Head* (Fig. 7). Eyes touching on frons for a distance equalling 2,5 times height of ocellar triangle. Upper facets strongly enlarged, with a rather sharp demarcation line against small facets on lower part of eye. Frontal triangle not raised in profile. All parts of head densely greyish tomentose; ornamented only by pair of small triangular blackish marks on upper part of frontal triangle. Occiput very concave, with about 10 short, but rather strong, black postocular setae each side. Frontal and facial pile restricted to a few pale hairs lateral to antennal bases. Ratio of antennal length:depth of head 15:28. Ratios of antennal segments as follows: scape 4:3, pedicellus 3:3, first flagellomere 6:4, style 2. Antenna yellow-brown, style darker, a few black setae on scape. Palpi yellow-brown, shorter than proboscis, which reaches to level of antennal bases.

*Thorax.* More distinctly hump-backed than preceding species. Mesonotal chaetation: np = 4, sa = 1, pa = 1, dc = 5, sc = 1. Whole thorax grey-brown to grey tomentose, no distinct pattern on disc. Pile on disc of mesonotum erect, rather sparse, and black; hairs shorter than half length of dorsocentral setae. Pleural pile pale.

Wings. Hyaline with uniform greyish brown tinge. Halter knob largely brownish.

Legs. Only hind femur with single anteroventral apical setae. Pile on posterior and posteroventral surfaces of fore and mid femora much shorter than in *keiseri*, and whitish. Femora blackish, but brownish towards apex, especially on mid femur. Tibiae and tarsi yellowish brown.

*Abdomen*. Basic pattern as in *keiseri*, but bands of yellowish brown integument in front of the white-yellow hindmargins much more extensive, extending greatly towards lateral margin. Pile as in *keiseri*.

♂ terminalia. Compared with those of type-species (Figs 2–5) have following differences: T8 wider at middle, epandrium lacks 'tooth' on posterolateral corners, and gonostylus more slender basally (as in *keiseri*). Distiphallus slightly sinuous (Fig. 5), not conical as in *keiseri*.

♀. Unknown.

Material examined. MADAGASCAR: 1 ♂ (holotype), Tuléar, Manombo s.l., 30.iii.1968, K. M. Guichard (ZMC); 1 ♂ (paratype), Tuléar, Manombo s.l., 31.iii.1968, K. M. G. & P. D. (BMNH).

Distribution. The type-locality is situated about 50 km N of Tuléar in the northernmost part of the semi-desert region of SW Madagascar.

## LIST OF DEPOSITORIES

BMNH = British Museum (Natural History), London, England.
NM = Natal Museum, Pietermaritzburg, South Africa.
ZMC = Zoological Museum, Copenhagen, Denmark.

## REFERENCES

LYNEBORG, L. 1980. Family Therevidae. *In:* R. W. Crosskey ed. *Catalogue of the Diptera of the Afrotropical Region*: British Museum (Natural History) pp. 314–320.

——— 1983. A review of the Palaearctic genera of Phycinae (Insecta, Diptera, Therevidae). *Steenstrupia* 9(8): 181–205.

——— 1987. Notes on the Phycini of southern Africa with the description of a new genus and two new species (Diptera: Therevidae: Phycinae). *Ann. Natal Mus.* **28**(2): 467–474.

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